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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,116	01/05/2001	Klaus Bohnert	004501-501	3279

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EXAMINER

NGUYEN, VINH P

ART UNIT PAPER NUMBER

2829

DATE MAILED: 09/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,116

Applicant(s)

BOHNERT ET AL.

Examiner

VINH P NGUYEN

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It appears that the specification does not have support for the limitation of "the at least one phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature dependence of a Verdet's constant (V) of the sensor fiber" as recited in claims 1 and 10

It also appears that the limitations "a function of a sign of the temperature dependence of the at least one phase delay element" as recited in claims 5-7 do not have support in the specification.

Furthermore, it appears that the limitations of claims 3 and 11 do not have support in the specification.

2. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear in which condition the phase delay element has to meet in order to have a phase delay with a temperature dependence which at least approximately compensates for temperature dependence of a Verdet's constant (V) of the sensor fiber. Furthermore, it is unclear whether the limitation of "the at least one phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature dependence

of a Verdet 's constant (V) of the sensor fiber" is positively claimed. In claim 2, it is unclear what a phase delay angle value deviated from a phase delay angle of an ideal phase delay element is in order to compensate for the temperature dependence of a Verdet's constant (V). In claim 3, it is unclear what "elliptical core" represents. Is it shown in any of drawings? In claim 4, it is unclear what "a function of a mutual alignment of fast axes of the phase delay elements" represents. In claims 5-7, it is unclear what "a function of a sign of the temperature dependence of the at least one phase delay element" represents. In claim 10, it is unclear in which condition the phase delay element has to meet in order to have a phase delay with a temperature dependence which at least approximately compensates for temperature dependence of a Verdet's constant (V) of the sensor fiber and it is unclear what a phase delay angle value deviated from a phase delay angle of an ideal phase delay element is in order to compensate for the temperature dependence of a Verdet's constant (V). Furthermore, it is unclear whether the limitation of "the at least one phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature dependence of a Verdet 's constant (V) of the sensor fiber" is positively claimed

The dependent claims not specifically address share the same indefiniteness as they depend from rejected base claims.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2,5-7 and 9-10(insofar as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Blakes et al (WO 98/58268 cited by Applicants on The PTO-1449).

As to claims 1,5-7 and 10, Blake et al disclose a fiber optic interferometric sensor having a coiled sensor fiber (92) enclosing a current conductor (24), at least a phase delay element (90,88) adjoining the sensor fiber (92). It appears that the phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature of a Verdet's constant of the sensor fiber (92). As to claim 2, it appears that the phase delay element has a phase delay angle deviating from a phase delay angle of an ideal phase delay element. As to claim 9, the device of Blakes et al is a reflection interferometer.

It is noted that the limitation of "the at least one phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature dependence of a Verdet's constant (V) of the sensor fiber" is not given any patentable weight.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-2,6-10 (insofar as understood) are rejected under 35 U.S.C. 102(e) as being anticipated by Bohnert et al (pat # 5953121).

As to claims 1-2,6-7 and 10, Bohnert et al disclose a magneto optic current sensor as shown in figure 1 having a coiled sensor fiber (11), at least one phase delay element (9,9') . It appears that the phase delay element has a phase delay angle whose value deviates from a phase delay angle of an ideal phase delay element. As to claim 8, the device of Bohnert et al is a Sagnac interferometer.

It is noted that the limitation of "the at least one phase delay element has a phase delay with a temperature dependence which at least approximately compensates for a temperature dependence of a Verdet's constant (V) of the sensor fiber" is not given any patentable weight.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Art Unit: 2829

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.



VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829

09/25/2002